

Remarks

Applicant does not acquiesce to any averment made in the Final Office Action dated May 17, 2010, which maintains each of the previously presented rejections without responding to Applicant's arguments and requests for clarification. As such, the Office Action, due to Applicant's unaddressed arguments and requests, fails to comply with 35 U.S.C. § 132 (sufficient detail must be provided by the Examiner regarding the alleged correspondence between the claimed invention and the cited reference to enable Applicant to adequately respond to the rejections); 37 CFR 1.104 ("The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified."); and M.P.E.P § 707.07(f).

As one example deficiency demonstrating a failure to provide a complete Action as required, the Office Action maintains a rejection of claim 5 without asserting any correspondence between the '698 reference and the claimed aspect of depositing a silicon-containing layer on the arsenic layer. It remains unclear to Applicant how these aspects are shown since Figure 2 of the '698 reference shows the arsenic layer surrounded by the polysilicon layer and monocrystalline layer. Accordingly, the rejections or the Finality of the Action should be withdrawn. In light of the time and expense required for Appeal and in the hopes that the Applicant and the Examiner may agree on the allowability of the presented claims, Applicant requests that the Examiner withdraw the Finality of the Office Action and provide an explanation on how the cited reference discloses the claimed aspects discussed in the previous Response and the discussion below.

Should the Examiner attempt to maintain the rejections without providing the requested clarification, Applicant would submit that the record is insufficient to maintain the rejection on Appeal and any ensuing attempt to bolster the Examiner's arguments would constitute "new grounds" of rejection, as Applicant would not have had a fair opportunity to respond thereto. *Hyatt v. Dudas*, 551 F.3d 1307, 1312 (Fed. Cir. 2008) ("a 'ground of rejection' for purposes of Rule 1.192(c)(7) is not merely the statutory requirement for patentability that a claim fails to meet but also the precise reason why the claim fails that requirement.") *See also, In re Kronig*, 539 F.2d 1300, 1302 (C.C.P.A. 1976).

The Final Office Action, maintains the objection to the specification and presents the following rejections: claims 1-5 and 8 stand rejected under 35 U.S. C. § 102(b) over Wild (U.S. Patent No 5,310,698); claims 1-3, 5 and 7-11 stand rejected under 35 U.S. C. § 102(b) over Hamasaki (U.S. Patent No. 5,250,448); claims 6-7 and 9-11 stand rejected under 35 U.S. C. § 103(a) over the '698 reference in view of Todd (U.S. Patent No. 6,821,825); and claims 4 and 6 stand rejected under 35 U.S.C. § 103(a) over the '448 reference in view of the '825 reference.

Before addressing the specifics of the rejections, in an effort to facilitate prosecution, Applicant notes that claim 1 has been amended. Applicant submits that the amendment is consistent with a plain reading of the claim by one skilled in the art, *e.g.*, that the monocrystalline silicon region is situated next to the region of silicon oxide at the time of performing step 1.

Applicant respectfully traverses the § 102 rejections of claims 1-5 and 8 and the § 103 rejection based on the '698 reference because the cited portions fail to correspond to the claimed invention. For example, the '698 reference does not show aspects of the claimed invention directed to formation of a layer of arsenic on a region of monocrystalline silicon by heating the semiconductor body having the monocrystalline silicon and silicon oxide at a surface thereof. The Office Action has yet to show correspondence to these claimed aspects. As acknowledged at page 6 of the Office Action, the '698 reference indicates that the SiO₂ layer is not formed until after formation of the polysilicon and arsenic layers (*see*, Figure 2 and related description). Therefore, the silicon oxide and monocrystalline regions are not heated in an atmosphere with an arsenic compound as claimed. Because, these aspects are not present in the '698 reference, the rejections are improper and Applicant requests they be withdrawn.

Applicant further traverses the § 102(b) rejection of claims 5 and 8 based upon the '698 reference because the cited portions fail to correspond to the claimed invention. For example, the cited embodiment shown in Figure 2 fails to correspond to aspects of the claimed invention directed to depositing a silicon-containing layer on the arsenic layer. As described above, Applicant is uncertain how a silicon-containing layer can be deposited on the arsenic layer as the cited Figure 2 shows the asserted arsenic layer

surrounded by the asserted polysilicon layer and monocrystalline layer. Accordingly, the § 102 rejection is improper and Applicant requests it be withdrawn.

Applicant respectfully traverses the § 103(a) rejection of claims 6-7 and 9-11 (based upon the '698 reference in view of the '825 reference) for the reasons stated above.

Applicant respectfully traverses the § 102(b) rejection of claims 1-3, 5 and 7-11 based upon the '448 reference because the rejections contain many of the same deficiencies as the §102 rejections based on the '698 reference. For example, the '448 reference does not show aspects of the claimed invention directed to forming a layer of non-monocrystalline silicon on a region of silicon oxide. In contrast, as acknowledged at page 7 of the Office Action, the '448 reference indicates that the asserted silicon oxide capping layer is not formed until after formation of the asserted non-monocrystalline and arsenic layers (*see*, Figures 1A-1C and the related description at columns 3-4). Thus, it is unclear how the Office Action is asserting that the '448 reference teaches forming a layer of non-monocrystalline silicon on a region of silicon oxide as claimed. Because these aspects are not present in the '698 reference, the § 102 rejection is improper and Applicant requests it be withdrawn.

Applicant respectfully traverses the § 103(a) rejection of claims 4 and 6 (based upon the '448 reference in view of the '825 reference) for the reasons stated above, and because the Office Action has failed to provide a valid motivation to combine the references. The cited portion of the '825 reference teaches a method that provides increased uniformity of layer thickness when forming large uniform layers in single wafer processing of semiconductors such as the formation of base layers in BJT. However, this benefit is inapplicable to the '448 embodiment because 1) the '448 embodiment requires a trench to be filled rather than the formation of a large uniform layer, and 2) thickness uniformity in filling a semiconductor trench is dependent on the uniformity of trench formation rather than formation of the filling material. Because the cited motivation is inapplicable to the '825 reference, the § 103 rejection is improper and Applicant requests that it be withdrawn.

Regarding the Office Action's suggestion to add section headings, Applicant respectfully declines because the indicated suggestions in 37 C.F.R. § 1.77(b) are not statutorily required for filing a non-provisional patent application under 35 USC § 111(a), but per 37 C.F.R. § 1.51(d) are only guidelines that are suggested for applicant's use.

Applicant notes Examiner's concern for which section attributes correspond to which written paragraphs, and submits that Applicant is not required to delineate written paragraphs into sections or categories. When Rule 77 was amended in 1996 (61 FR 42790, Aug. 19, 1996), Bruce A. Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, stated in the Official Gazette:

Section 1.77 is permissive rather than mandatory.... 1.77 merely expresses the Office's preference for the arrangement of the application elements. The Office may advise an applicant that the application does not comply with the format set forth in 1.77, and suggest this format for the applicant's consideration; however, the Office will not require any application to comply with the format set forth in 1.77.

In view of the above, Applicant prefers not to add section headings.

Regarding the Examiner's note on page 6 of the instant Office Action, Applicant submits that a certified copy of the original foreign application, specification, and drawings (*i.e.*, EP 02080509.09) was provided for the instant application as required by 35 U.S. C. § 119(a)(3). Applicant notes that copies of these documents can be found in the image file wrapper in public PAIR on the U.S.P.T.O.'s website. As the requirements of § 119(a)(3) have been met, it is unclear to Applicant what additional documentation is being requested by the Examiner.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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